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**From:** McKee, Loree [Loree.Mckee@crestwoodlp.com]  
**Sent:** 9/10/2018 9:00:41 PM  
**To:** North, Alexis [North.Alexis@epa.gov]  
**CC:** Lagerstrom, Mitch [Mitch.Lagerstrom@crestwoodlp.com]  
**Subject:** EPA Audit: Arrow Response to Final Report  
**Attachments:** Arrow Response to EPA Audit Findings.pdf

Good afternoon Alex,

Please review the attached letter in response to your inspection report findings received on July 19, 2018 regarding a Full Compliance Evaluation (FCE) Off-site Clean Air Act inspection performed for Arrow Stations 1-6 located at the Fort Berthold Indian Reservation in Dunn and McKenzie Counties, North Dakota. A hard copy of this letter will also be mailed to the address you provided in your letter, directed to your attention. Arrow appreciates the opportunity to respond to the inspection findings.

Please feel free to contact me if you have any questions or require additional information.  
Thank you,

**Loree McKee**  
**Air Quality Specialist**

811 Main Street, Suite 3200  
Houston, TX 77002  
P: 713-380-3220 | C: 817-319-5219  
F: 832-519-2250  
Loree.Mckee@crestwoodlp.com  
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**From:** McKee, Loree  
**Sent:** Thursday, July 19, 2018 2:15 PM  
**To:** 'North, Alexis'  
**Cc:** Lagerstrom, Mitch  
**Subject:** RE: Please Review - EPA Audit OOOO Tank Applicability

Alex,

Thank you for sending the results. We will review and let you know if we have any questions.

Best Regards,

**Loree McKee**  
**Air Quality Specialist**

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**From:** North, Alexis [<mailto:North.Alexis@epa.gov>]  
**Sent:** Thursday, July 19, 2018 1:27 PM  
**To:** McKee, Loree  
**Cc:** Lagerstrom, Mitch  
**Subject:** RE: Please Review - EPA Audit OOOO Tank Applicability

Loree and Mitch,

Thanks for all your efforts and attention as I completed my desktop review of Compressor Stations 1-6 on the Fort Berthold Indian Reservation.

Please find my final report attached here.

If you have any questions, please let me know,

Alex North

Alexis North, Environmental Scientist  
Office of Enforcement, Compliance & Environmental Justice  
EPA Region 8  
1595 Wynkoop Street (8ENF-AT)  
Denver, CO 80202-1129  
Phone: 303-312-7005  
Email: [north.alexis@epa.gov](mailto:north.alexis@epa.gov)

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**From:** McKee, Loree [<mailto:Loree.McKee@crestwoodlp.com>]  
**Sent:** Monday, July 9, 2018 12:06 PM  
**To:** North, Alexis <[North.Alexis@epa.gov](mailto:North.Alexis@epa.gov)>  
**Cc:** Lagerstrom, Mitch <[Mitch.Lagerstrom@crestwoodlp.com](mailto:Mitch.Lagerstrom@crestwoodlp.com)>  
**Subject:** RE: Please Review - EPA Audit OOOO Tank Applicability

Hi Alex,

I will certainly apply the new emission factors to that year as well and send you the results.  
Thank you for working with us on this issue – I appreciate all your patience.

Please feel free to let me know if there are any further questions or concerns,  
Best Regards,

**Loree McKee**  
**Air Quality Specialist**

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**From:** North, Alexis [<mailto:North.Alexis@epa.gov>]  
**Sent:** Monday, July 09, 2018 11:07 AM  
**To:** McKee, Loree  
**Cc:** Lagerstrom, Mitch  
**Subject:** RE: Please Review - EPA Audit OOOO Tank Applicability

Thanks for this Loree, it's very helpful. Can you do the same for 2016 as that year also reported over 6 tons? I want to make sure we cover our bases in this one inspection report for both years.

Thanks again,

Alex

Alexis North, Environmental Scientist  
Office of Enforcement, Compliance & Environmental Justice  
EPA Region 8  
1595 Wynkoop Street (8ENF-AT)  
Denver, CO 80202-1129  
Phone: 303-312-7005  
Email: [north.alexis@epa.gov](mailto:north.alexis@epa.gov)

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**From:** McKee, Loree [<mailto:Loree.McKee@crestwoodlp.com>]  
**Sent:** Monday, June 18, 2018 3:26 PM  
**To:** North, Alexis <[North.Alexis@epa.gov](mailto:North.Alexis@epa.gov)>  
**Cc:** Lagerstrom, Mitch <[Mitch.Lagerstrom@crestwoodlp.com](mailto:Mitch.Lagerstrom@crestwoodlp.com)>  
**Subject:** FW: Please Review - EPA Audit OOOO Tank Applicability

Alex,

In response to our recent discussion regarding the VOC emissions reported in the Stations 1-6 Title V Fees Report for the condensate tank located at Station 5, and the possible NSPS OOOO applicability for this tank – it was found that the factors being used in our calculations for flash emissions were highly overestimated and did not correctly represent the accurate flash vapors for this tank.

We used EPA Tanks 4.09D for tank working and breathing losses, and E&P Tanks for flashing losses since we did not have an alternative mode of obtaining flash factors. The E&P Tanks program has been notorious for inaccurate estimation of Gas to Oil Ratio and Flash wt% compositions when either defaults are used, or data is input incorrectly. In this case, we used the default settings in the program, which resulted in an inaccurately high GOR.

Crestwood has recently begun using VMGSim™ software for project analyses as this has been found to be more accurate in representing actual pollutant factors since there is no conversion required to find needed factors. After our discussion, we input an actual condensate liquid sample analysis from the tank into the VMGSim™ and received a more accurate flash vapor analysis and associated GOR and flash mole%. I applied the new factors to the same calculation

methodology used for the Title V Fees Report, and the resulting potential VOC emissions using actual samples were found to be below the NSPS OOOO standard (<6tpy VOC) for applicability.

Please review the attached revised calculations which reflect the flash factors from the VMG Simulation. The VMG analysis is attached for your reference as well.

Feel free to contact me with any questions, concerns or comments – I will be glad to help if possible.

Thank you for your patience on this,

**Loree McKee**  
**Air Quality Specialist**

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